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AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A system for estimating a self posture of a leg type moving robot being controlled to follow a determined desired gait, comprising:

a posture angular velocity detecting means for detecting a posture angular velocity of a predetermined part of the robot;

a slippage-free posture bony velocity estimating means for estimating a posture angular velocity of the predetermined part on the basis of motion state amounts of the robot, including at least one of a desired motion of the desired gait, a detected value of a displacement of a joint of the robot, and a desired value of a displacement of the joint, on the assumption that there is no slippage on a contact surface between the robot and a floor;

a drift correction value determining means for determining a drift correction value relative to a detected value of the posture angular velocity detecting means on the basis of at least a detected value of the posture angular velocity detecting means and a posture angular velocity estimated by the slippage-free posture angular velocity estimating means; and

an integrating means for integrating at least the posture angular velocity obtained by correcting a detected value of the posture angular velocity detecting

means by using the drift correction value, thereby to estimate a posture angle of the predetermined part,

wherein the drift correction value determining means determines a new drift correction value so as to bring a difference between a posture angular velocity obtained by correcting a detected value of the posture angular velocity detecting means by using the drift correction value and a posture angular velocity estimated by the slippage-free posture angular velocity estimating means close to zero.

2. (Original) The system for estimating a self posture of the leg type moving robot according to Claim 1, wherein the drift correction value determining means comprises a means for determining whether the rotational slippage is taking place on a contact surface between the robot and a floor, and a value of the drift correction value is retained if it is determined that the rotational slippage is taking place.

3. (Original) A system for estimating a self posture of a leg type moving robot, comprising:

a posture angular velocity detecting means for detecting a posture angular velocity of a predetermined part of a leg type moving robot;

a drift correction value determining means for determining, on the basis of at least a detected value of the posture angular velocity detecting means in a state wherein a motion of the robot is stopped, a drift correction value relative to the detected value; and

an integrating means for integrating at least a posture angular velocity obtained by correcting a detected value of the posture angular velocity detecting means by the drift correction value while the robot is in motion so as to estimate a

posture angle of the predetermined part.

4. (Original) The system for estimating a self posture of a leg type moving robot according to Claim 1, wherein the drift correction value determining means determines the drift correction value on the basis of a component in a yaw direction of a detected value of the posture angular velocity detecting means and a component in the yaw direction of a posture angular velocity estimated by the slippage-free posture angular velocity estimating means.

5. (Original) The system for estimating a self posture of a leg type moving robot according to Claim 3, wherein the drift correction value determining means determines the drift correction value on the basis of a component in the yaw direction of a detected value of the posture angular velocity detecting means.

6. (Currently Amended) The system for estimating a self posture of a leg type moving robot according to Claim 1 or 3, wherein the predetermined part is a body of the robot.

7. (New) The system for estimating a self posture of a leg type moving robot according to Claim 3, wherein the predetermined part is a body of the robot.